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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/977,713	10/12/2001	Patrick M. Sewall	RIDG101	3294

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EXAMINER	
COBY, FRANTZ	
ART UNIT	**PAPER NUMBER**
2161	

DATE MAILED: 12/23/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Applicati n No.	Applicant(s)	
	09/977,713	SEWALL ET AL.	
	Examiner	Art Unit	
	Frantz Coby	2161	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE ____ MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *01 December 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-53* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-53* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *12 October 2001* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

This is in response to Applicant's RCE (Request for Continuing Examination) filed on December 01, 2004 in which claims 1-53 are presented for examination.

Status of Claims

Claims 1-53 are pending.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 1-6, 27-40 rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter which is a data structure not claimed as embodied in computer-readable media. The claims are descriptive material per se and are not statutory also, because they are not capable of causing functional change in a computer. See, e.g., Warmerdam, 33 F.3d at 1361, 31 USPQ2d at 1760 (claim to a data structure per se held nonstatutory). Such claimed data structures do not define any structural and functional interrelationships between the data structure and other claimed aspects of the invention, which permit the data structure's functionality to be realized.

As per claims 1 and 27, the language of the claims raises a question as to whether the claims are directed merely to a data structure that is not tied to a technological art, environment or machine which, would result in a practical application

producing a concrete, useful and tangible result to form the basis of statutory subject matter under 35.U.S.C. 101.

As per claims 2-6 and 28-40, these claims are at least rejected for their dependencies directly or indirectly on the rejected claims 1 and 27 above.

Claims 1-6 and 27-40 are also rejected under 35 U.S.C. 112, first paragraph. Specifically, since the claimed invention is not supported by either a technological art, environment or machine asserted utility or a well established utility for the reasons set forth above, one skilled in the art clearly would not know how to use the claimed invention.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was

not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1-53 are rejected under 35 U.S.C. 103(a) as being unpatentable over Middleton WO 00/70770 in view of Chambers IV U.S. Patent no. 5,426,779.

As per claim 1, Middleton discloses "a compressed data structure" by providing a Compression/Decompression method (See Middleton Title). In particular, Middleton discloses the claimed limitations of "a plurality of code strings" as control codes (See Middleton Figure 1, component 12; top of page 11) and "a plurality of look-up strings" as look-up table means (See Middleton Figure 1, component 10; bottom of page 10, page 6).

It is noted, however, Middleton did not specifically disclose "an index identifying a particular code string to be retrieved and an instruction identifying an operation to be performed on the retrieved code string" as recited in the instant claim 1. On the other hand, Chambers, IV discloses a data compression/decompression system including a lookup table indexable by data pairs from the history buffer wherein an encoding scheme may by employed (See Chambers IV Figures 7, 10 and corresponding text; Col. 2, line 62-Col. 3, line 7).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modified the system of Middleton and Chambers IV because they are both directed to method and apparatus for data compression/decompression and are

both from the same field of endeavor. One of ordinary skill in the art at the time of the invention would have been motivated to do so because the indexing teachings of Chambers IV will permit the lookup table of Middleton to search and retrieve code strings more efficiently.

As per claim 2, most of the limitations of this claim have been noted in the rejection of claim 1 above. In addition, Chambers IV discloses the claimed limitations of "wherein at least some of the code strings are positioned in a library and the index of at least one look-up string identified a position in the library form which a particular code string is to be retrieved" (See Chambers IV Figure 7; Col. 5, line 15-Col. 6, line 49).

As per claim 3, most of the limitations of this claim have been noted in the rejection of claim above. In addition, Chambers IV discloses the claimed limitations of "a segmented library, each segment of the library containing at least one code string" (See Chambers IV Figure 7) wherein at least some of the code strings are positioned in a library and the index of at least one look-up string identified a position in the library form which a particular code string is to be retrieved" (See Chambers IV Figure 7; Col. 5, line 15-Col. 6, line 49).

As per claims 4-6, most of the limitations of these claims have been noted in the rejection of claim 1 above. In addition, Chambers discloses the claimed limitations of code strings are positioned in a history cache as a history buffer (Figure 7), instruction to retrieve the code string (See Chambers IV' Col. 10, line 50-Col. Col. 12, line 51).

As per claim 7, most of the limitations of this claim have been noted in the rejection of claim 1 above. In addition, Middleton discloses the claimed limitations of "a decompression engine operable, for at least one look-up string, to retrieve a code string identified by the index in the look-up string and to perform operation on or using the retrieved code string according to the instruction in the look-up string" through a decompression method using an expansion technique (See Middleton Title, page 7).

As per claims 8-13, most of the limitations of these claims have been noted in the rejection of claim 7 above. In addition, Chambers discloses "wherein at least some of the code strings are positioned in a library and the index of at least one look-up string identified a position in the library form which a particular code string is to be retrieved" (See Chambers IV Figure 7; Col. 5, line 15-Col. 6, line 49); "a segmented library, each segment of the library containing at least one code string" (See Chambers IV Figure 7); an output memory; writing code strings to the memory; altering code strings (See Chambers IV Figures 1-3, Col. 4, lines 26-41).

As per claims 14-15, most of the limitations of these claims have been noted in the rejection of claim 7 above. In addition, Chambers discloses code stings comprise thirty-two bits and look-up string includes no more than eight bits (See Chambers IV Figure 7).

As per claim 16, most of the limitations of this claim have been noted in the rejection of claim 7 above. In addition, Middleton discloses the claimed features of "a first memory location", "a second memory location", and "a processor" through the computers connected in the Internet environment wherein the compression and decompression method is being implemented (See Middleton Abstract).

As per claims 17-26, most of the limitations of these claims have been noted in the rejection of claim 16 above. In addition, Chambers discloses "wherein at least some of the code strings are positioned in a library and the index of at least one look-up string identified a position in the library form which a particular code string is to be retrieved" (See Chambers IV Figure 7; Col. 5, line 15-Col. 6, line 49); a processor cache as a buffer (Figure 7); a segmented library (Figure 7); code strings are positioned in a history cache as a history buffer (Figure 7); instruction to retrieve the code string (See Chambers IV Col. 10, line 50-Col. Col. 12, line 51); retrieve a code string identified by the index in the look-up string and to perform operation on or using the retrieved code string according to the instruction in the look-up string through a decompression method using an expansion technique (See Middleton Title, page 7);

writing code strings to the memory; altering code strings (See Chambers IV Figures 1-3, Col. 4, lines 26-41); first memory location; second memory location; output memory location (See Chambers Figure 1).

As per claim 27, Middleton discloses the claimed limitations of "a method for decompressing a data structure having a plurality of look-up strings and a plurality of code strings" through a decompression method using an expansion technique (See Middleton Title, page 7). In particular, Middleton discloses reading a look-up string; retrieving a code string identified by the look-up string; and performing on the retrieved code string an operation identified by the look-up string through a browser wherein as control codes that are retrieved (See Middleton Figure 1, component 12; top of page 11) and a plurality of look-up strings are read (See Middleton Figure 1, component 10; bottom of page 10; page 6).

As per claims 28-40, most of the limitations of these claims have been noted in the rejection of claim 27 above. In addition, Chambers discloses "wherein at least some of the code strings are positioned in a library and the index of at least one look-up string identified a position in the library form which a particular code string is to be retrieved" (See Chambers IV Figure 7; Col. 5, line 15-Col. 6, line 49); a processor cache as a buffer (Figure 7); a segmented library (Figure 7); code strings are positioned in a history cache as a history buffer (Figure 7); instruction to retrieve the code string (See Chambers IV Col. 10, line 50-Col. Col. 12, line 51); retrieve a code

string identified by the index in the look-up string and to perform operation on or using the retrieved code string according to the instruction in the look-up string through a decompression method using an expansion technique (See Middleton Title, page 7); writing code strings to the memory; altering code strings (See Chambers IV Figures 1-3, Col. 4, lines 26-41); first
memory location; second memory location; output memory location (See Chambers Figure 1).

As per claim 41, all the limitations of this claim have been noted in the rejection of claim 27. It is therefore rejected asset forth above.

As per claims 42-53, most of the limitations of these claims have been noted in the rejection of claim 41 above. In addition, Chambers discloses "wherein at least some of the code strings are positioned in a library and the index of at least one look-up string identified a position in the library form which a particular code string is to be retrieved" (See Chambers IV Figure 7; Col. 5, line 15-Col. 6, line 49); a processor cache as a buffer (Figure 7); a segmented library (Figure 7); code strings are positioned in a history cache as a history buffer (Figure 7); instruction to retrieve the code string (See Chambers IV Col. 10, line 50-Col. Col. 12, line 51); retrieve a code string identified by the index in the look-up string and to perform operation on or using the retrieved code string according to the instruction in the look-up string through a decompression method using an expansion technique (See Middleton Title, page 7); writing code strings to the

memory; altering code strings (See Chambers IV figures 1-3, Col. 4, lines 26-41);.first memory location; second memory location; output memory location (See Chambers Figure 1).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Frantz Coby whose telephone number is 571 272 4017. The examiner can normally be reached on Monday-Saturday 3:00PM-10: 30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Safet Metjahic can be reached on 571 272 4023. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Frantz Coby
Primary Examiner
Art Unit 2161

December 18, 2004